

How Arc, powered by AWS, helped clients face unprecedented demand and siloed workforces due to COVID-19



Executive Summary

As the COVID-19 pandemic roiled the world, news sites had never faced higher stakes — all-time traffic records, with disrupted remote workflows and unprecedented business pressures.

Arc Publishing, the CMS built on top of AWS, helped its clients meet increasing demand while lowering subscriber churn, making working from home easier, and allowing people to broadcast directly from their phones, reducing reliance on complex video equipment.

The Greatest Crisis in Modern Memory

The COVID-19 pandemic is the greatest global crisis in a generation. Every country in the world faced major disruptions to their economy and public health while millions of people have been infected and billions have been affected. As unemployment soared and employees worked from home, people spent an increasing amount of time, seeking trustworthy information.

News organizations had never been more needed, yet they faced four major challenges:

- 1) For many, site traffic spiked 2X to 3X — the kind of unexpected load that can tax infrastructure to the breaking point.
- 2) Journalists had to produce content while physically distancing from editors, with all communication taking place electronically.
- 3) With teams dispersed, there was never enough heavy broadcast equipment to go around.
- 4) Advertising revenue plunged as businesses globally saw revenues plummet or were forced to shutter altogether.

Built to Meet Rising Demand

Arc's microservices architecture was built for scale. Leveraging more than one hundred of the services in AWS, Arc clients easily handled increased traffic with no worries about site health.

To ensure optimal performance, Arc's multitenant content platform extensively leverages EC2, ECS, Elasticsearch, Kinesis, and Cloudfront. The single-tenant rendering tier uses Lambda and DynamoDB, with an ECS-powered origin server. Because of AWS, Arc can leverage infrastructure as code, scaling compute resources with usage, automatically, consistently and reliably.

At the same time that content teams moved to remote work, they increased their content volumes to deliver frequent breaking updates. Because of AWS' global presence, Arc was able to offer high performance no matter where remote workers were located, with resources nearby.

Arc Clients

The logo for The Dallas Morning News, featuring the words "The Dallas Morning News" in a black, gothic-style serif font, stacked vertically.





In recent years, many Arc clients have pursued subscription strategies alongside their traditional advertising business. In the midst of this crisis, these clients were able to demonstrate their value to subscribers with high availability and performance, ultimately leading to a reduction in subscriber churn rates.

For remote workers, Arc's scheduling and planning tool WebSked was critical, enabling workers to collaborate with their colleagues using a flexible webhook-based rules engine, regardless of location or time zone.

During the pandemic, Arc accelerated the release of its live video streaming app, Broadcast, that enabled journalists to stream video directly from their iPhone to any channel, without the need for cumbersome remote broadcasting equipment.

The Result

Across the world, publishers reported astonishing growth in user engagement.

"Pageviews are up 90 percent. Users are up 70 percent. New users are up 75 percent. Sessions are up 96 percent," said Mike Orren, chief product officer at the Dallas Morning News, in an [interview with Ken Doctor](#).

"Dallas has seen no interruptions on the site during the crisis," Orren added.

"Arc enabled our entire digital newsroom to go 100 percent remote virtually overnight, with minimal dependency from our IT department," said Sebastián Rivas, Audiences Editor at Grupo Copesa-La Tercera in Chile. "The COVID-19 crisis drove our site traffic and users beyond our historical records... WebSked became the newsroom's indispensable tool. We had been using Collections to curate breaking news since launch which prepared us very well for spinning up new site features as our COVID-19 information center."

Broadcasters have seen the same results, according to lead developer Michael Newman and product director Jonathan Beard, both of Graham Media Group. "Arc has been rock-solid stable through this critical time for our communities," said Beard and Newman.

"Arc tools are deployed throughout our 'virtual newsrooms,' aka people's homes. We can execute live events with the use of only a cell phone. Rapidly deployed Chromebooks have become publishing platforms--leveraging the Arc tools like Composer, and Video Center," they continued. "Our stations' websites have become the virtual city centers, where town halls and forums are created where we can continue to provide the best possible information to people who need it right now."

About Arc Publishing

Arc Publishing is an award-winning, state-of-the-art digital platform and suite of tools that's engineered to meet the demands of modern publishers, brands and broadcasters around the world, providing a competitive advantage enhanced by a set of sophisticated machine learning and AI-powered tools. Built by The Washington Post, Arc has powered the digital transformation of clients both large and small across the globe, currently serving more than 900 million unique visitors monthly. At its core, Arc is about speed and innovation: for readers, newsrooms, brands, advertisers and developers.

